

from traditional forward-linking analysis of the parsed text. Iteration of this technique can further enhance the results.

The foregoing and additional features and advantages of the present invention will be more readily apparent from the following detailed description thereof, which proceeds with reference to the accompanying drawings.

#### Brief Description of the Drawings

Fig. 1 is a flow chart illustrating a method for generating a lexical knowledge base according to one embodiment of the present invention.

Fig. 2 is a logical form produced from a definition of the word "market" in accordance with one embodiment of the present invention.

Fig. 3 is a semantic relation structure corresponding to the logical form of Fig. 2.

Fig. 4 is an inverted semantic relation structure derived from the semantic relation structure of Fig. 3.

Fig. 5 is an illustration of an exemplary semantic network discussed in the specification.

Fig. 6 shows the semantic network of Fig. 5 with elaboration.

Fig. 7 is an illustration of another exemplary semantic network.

Fig. 8 is a structural diagram in accordance with one embodiment of the present invention.

#### Detailed Description

We now describe our use of DB methods to automatically create a semantic knowledge base

from an on-line dictionary.

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*Handwritten: H. G. G. G.*

other device for providing input data to the computer.  
Output device 116 can be a display device, printer, or  
other device for providing output data from the computer.--

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Page 32, line 16, delete "implementations"

In the Claims:

Delete claims 1-15 without prejudice and add the following  
new claims:

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*Handwritten: 13*

16. A method for generating a lexical knowledge base in  
a memory of a machine, comprising the steps:

(a) parsing a segment of text to obtain a logical form  
corresponding thereto using a natural language parser associated  
with said machine;

(b) using said machine to extract from the logical form a  
complex semantic relation structure, the complex semantic  
relation structure including at least a headword, a semantic  
relation, and a value; the value of said complex semantic  
relation structure including a primary value term, a lower level  
relation, and a lower level value term;

(c) storing in the lexical knowledge base in said machine  
memory the complex semantic relation structure in association  
with the headword; and